



脉冲试验台

IMPULSE TEST STAND

BI 103



BIMAL TESTING MACHINES S.P.A.

Zona Industriale – Via A. Monni, 18 – 06135 Ponte Vallecceppi (Perugia) ITALY

Tel. +39 075 59217.1 Fax. +39 075 59217.40

E-mail: bimal@bimal.com Internet: www.bimal.com



总说明书



GENERAL SPECIFICATIONS

BI103 是一种脉冲试验台，可用于测试软管以及其他液压元件。
此试验机符合以下技术规格：

- 方波脉冲波： SAE J343 - ISO 6803- ISO 6605
- 峰值波脉冲波： ISO 6772
- 至 20 点可编程波

主要设备是由已包括电源网与液压网的单个组件组成的。

技术指标：

- 连接端口： 0°/180°向： 6 个 -- 90°向： 4 个
- 最高试验压力： 100 巴
- 最低试验压力： 10 巴
- 每个脉冲位移： 600 立方厘米
- 最大试验频率： 1.5 赫兹
- 最高油温： 150 摄氏度
- 接口端最大距离： 2,000 毫米

试验性能：

- 600 立方厘米每秒至 100 巴
- 2 根 2"软管 (OD 63.5mm)，管长度 1550 毫米，弯曲半径 320 毫米，体积膨胀 1.5% 每 100 巴
- 2 根 3 向歧管(0°, 45°, 90°)，全部端口是 SAE 6000 法兰式：
 - 0°向： 6 个 ¾" 或 1" 端口
 - 45°向： 4 个 1" 或 1¼" 端口
 - 90°向： 6 个 1" 或 1¼" 端口

标配含每个端口的插头

- 在每次循环结束时都会有一个液压装置来冲洗被测元件以保持 PT100 热敏电阻检测到的温度恒定。

安全装置：

- 可以避免在门开启状态下运行试验的联锁装置
- 配备有安全玻璃和铁丝网的窗口
- 紧急按钮
- 万一被测元件发生故障或泄漏或者机器发生故障时可自动停机

动力供给：

- 电气标准供应： 400 伏特 – 50 赫兹 – 26 千伏安 (60 Hz 可 选配)
- 工业冷却水温度 T ≤ 20 摄氏度

尺寸和重量：

- 关门情况下： 3.550 x 1.800 x 2.300 毫米(长, 宽, 高)
- 高度 = 2.600 毫米包含圆柱形的灯
- 净重： 3.000 公斤

颜色：

- 标准色：灰色 Bimal RAL 7035

标配中不含流体以及适配器

可选的脉冲形状：

方波脉冲，峰值波脉冲，定制脉冲

The model **BI103** is a powerful test stand solution designed to perform impulse test on flexible hoses and other components according to the following Norms:

- Square wave impulse: SAE J343 - ISO 6803 - ISO 6605
- Peak wave impulse: ISO 6772
- Programmable wave up to 20 points
- Basic equipment is composed by a single module with electrical and hydraulic networks inside.

TECHNICAL SPECIFICATIONS:

- Connection ports: 6 at 0° and 180° - 4 at 90°
- Maximum Test Pressure: 100 bar (1.450 psi)
- Minimum Test Pressure: 10 bar(145 psi)
- Displacement per Impulse: 600 cm³ (36.6 inch³)
- Maximum test Frequency: 1.5 Hz
- Maximum Oil Temperature: 150°C (302°F)
- Max distance between manifolds: 2.000mm (78")

Test performance

- 600 cc / sec up to 100 bar
- 2 hoses 2" (OD 63.5mm) , hose length 1550mm, bending radius 320mm, volumetric expansion 1.5% every 100 bar
- 2 manifolds with 3 faces (0°, 45° and 90°) all ports are SAE 6000 flanges type:
 - 0° face: 6 ports ¾" and 1"
 - 45° face: 4 ports 1" and 1¼"
 - 90° face: 6 ports 1" and 1¼"

Supply includes plugs for each port

- A hydraulic device flushes the components under test at the end of each cycle keeping the temperature constant detectable by a PT100 thermal resistor

SAFETY DEVICES:

- Interlocks avoids to run the test with open doors
- Window equipped with Safety Glass and Wire Mesh
- Emergency push-button
- Automatic stop in case of failure or leakage of UUT or machine malfunction

POWER SUPPLY:

- Electrical standard supply: 400 V – 50 Hz – 26 kVA (60 Hz available on request)
- Industrial cooling water T ≤ 20°C (68° F)

DIMENSIONS AND WEIGHT:

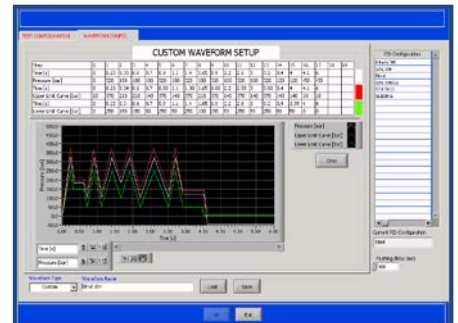
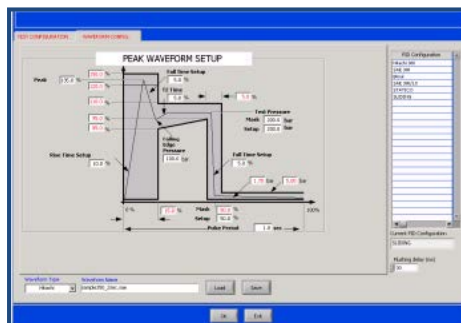
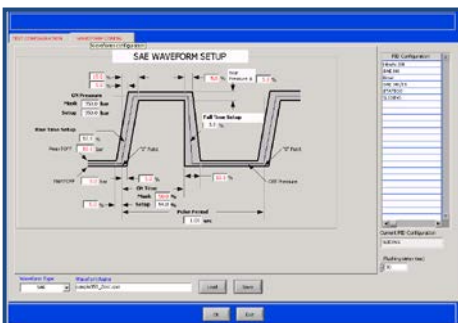
- 3.550 (140") x 1.800 (71") x 2.300 (91") mm (l, d, h) closed doors
- h = 2.600 mm (102") with column lights
- Net Weight 3.000 kg (6615 lbs)

COLOR:

- Standard: Grey Bimal RAL 7035
- Fluid and adapters are not included in the supply**

WAVE FORMS AVAILABLE:

Square wave, Peak wave, Custom wave



测试循环自动化由测试机内建的一台可编程控制器与一台 PC 而控制的。比尔玛的软件允许操作者根据自身需求设定一系列测试设置、实时观察和分析测试结果的数值与示意图、将测试报告存储而打印。

系统包括通过网络的**远程服务**。

下图展示了试验曲线的实时绘制，含以下细节：

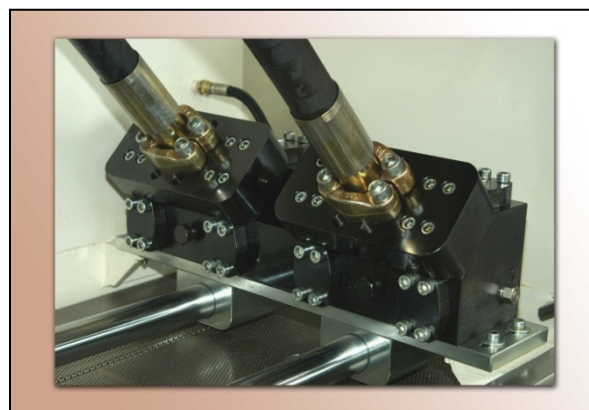
- 中间展示的实时压力曲线
- 屏幕右边的曲线展示压力曲线与认可模板相配
- 温度、增压缸位置等测试参数被展示在右边曲线的上边
- 顶栏包括测试机现况，而且展示在测试中的阶段、压力参数、循环次数以及故障次数。

The PLC and built-in industrial PC combined provide the control to run automatically test cycles. Bimal's software allows operator to set and program different test configurations based on your requirements. It monitors results in real-time permitting the operator to analyze values and graphs, to save and print final results. The industrial PC controls all operations.

The supply comes with **remote assistance** by internet.

The picture shown below brings real-time plotting of the test curve with following details:

- Pressure curve displayed in the center.
- The curve in the right side of the screen represents pressure wave matching with acceptance mask.
- The parameters such temperature, positioning of intensifier and more, are displayed above the curve on the right.
- The diagnostic bar on top represents current status of events displaying phase-in, pressure cycle's number of errors.



图像展示连接以下法兰的适配器：

- SAE 6000 法兰 2" 与 1 ½"
- SAE 3000 法兰 3"

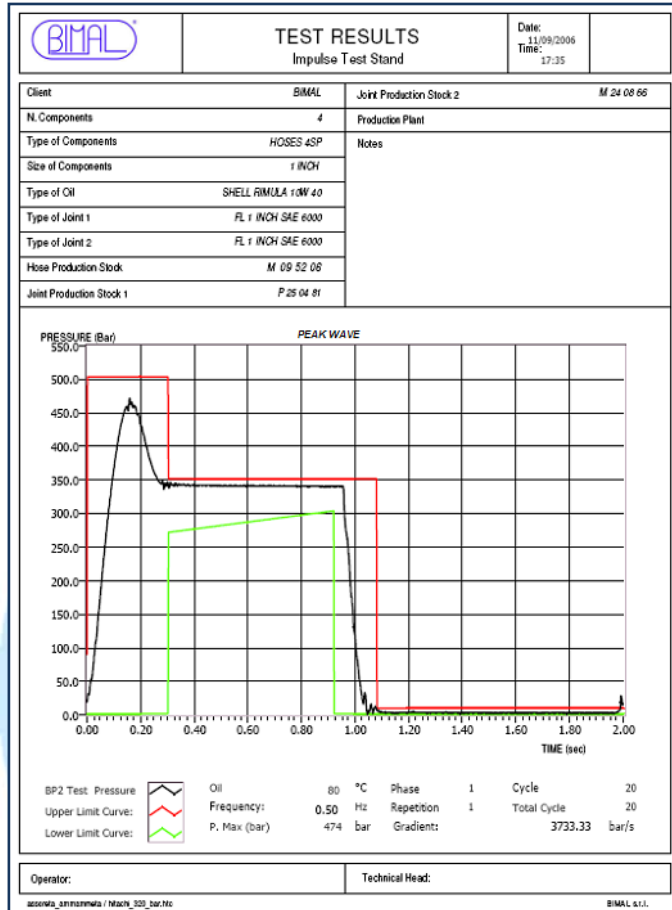
The picture shows the adapters for:

- SAE 6000" e 1 ½" flange
- SAE 3000 3" flange

循环试验报告和记录

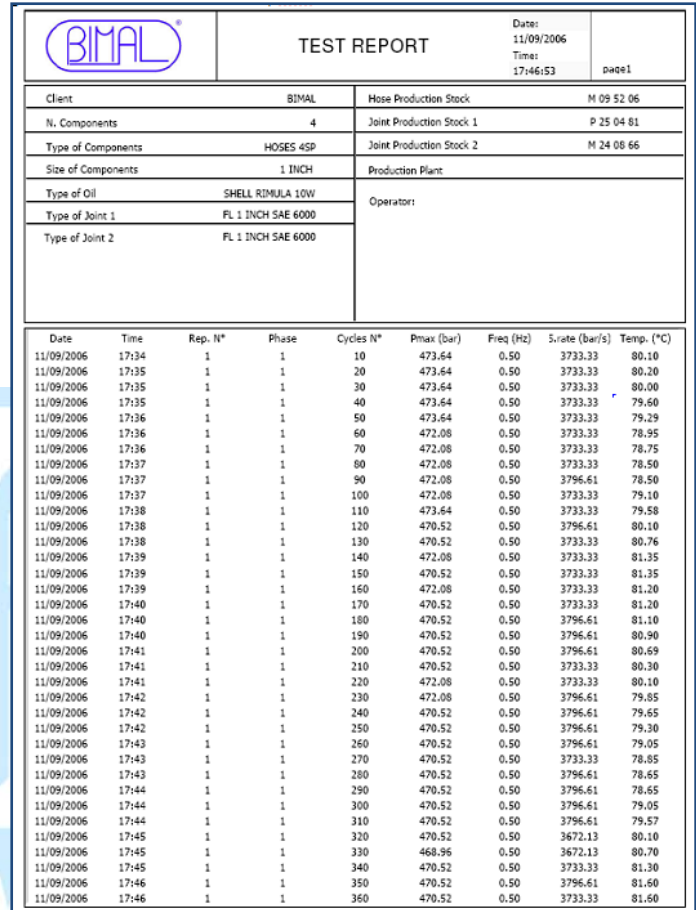
一份循环试验的特征报告如图所示。该报告概括了识别数据和最重要的一些数据如温度、压力、压力梯度和频率。此外图表还显示了压力分布是否与验收码符合。记录文件可保存为 TXT, PDF 和 HTML 格式。

试验历史记录文件可以按照用户自定义的记录间隔来保存并且打印出如上图所示的范例。



CYCLE TEST REPORT AND LOGGER

A characteristic report of Cycle test is shown below. The report summarizes the identification data and the most important values such temperature, pressure, pressure gradient and frequency. Furthermore the graph shows whether pressure profile matches acceptance mask. The logger file can be saved in TXT, PDF and HTML format. The test history logger file can be saved and print as per the example showed below with user-defined recording intervals.



建议用油:

试验台可以使用大多数最常见的液压油，如 ISO VG 32 和 ISO VG 46。如果需要运行试验时，温度高于 80 摄氏度，我们建议使用更加耐氧化的油，诸如 SHELL RIMULA R6M 10W-40。在首次启动的时候，试验台需要约 300 升（约 75 加仑）油。

技术规格可无通知而改变

SUGGESTED OIL

The test stand can operate with the most common hydraulic oils such as ISO VG 32 and ISO VG 46. To run tests at temperature highest than 80°C, we suggest to use oils more resistant to oxidation like SHELL RIMULA R6M 10W-40.

The test stand needs about 300 (~ 75 gallons) liters of oil at the first start up.

Technical specifications can be changed without notice

订货号 - ORDER CODE:

BI103



BIMAL TESTING MACHINES S.P.A.

Zona Industriale – Via A. Monni, 18 – 06135 Ponte Vallecceppi (Perugia) ITALY

Tel. +39 075 59217.1 Fax. +39 075 59217.40

E-mail: bimal@bimal.com Internet: www.bimal.com